

Setting up and rotating activity centers as a regular part of your program is a quick way to support STEM-centered independent explorations, especially – though not exclusively – with elementaryage students.

Well-planned activity centers engage children and youth in hands-on, independent exploration and learning targeted to specific objectives. Students can participate in developing ideas and materials for centers, and in setting them up and managing them. 'Centers' may be an area of the room, or simply activities kept in shoeboxes and worked with on a table.

Specify the learning objectives in the planning stage, then make the purpose, rules, and expectations clear to participants. Watch centers in use to see if they're working. Check if children seem engaged, distracted, or bored. Talk to students to gauge outcomes. Discuss with staff, and make revisions as needed.

Centers may be made available at set times, or during homework time for those who have no homework or who finish early, or as a break. As time goes on, build a repertoire of multiple centers that participants can choose from. Experiment with making several different activities available at the same time for students to move among freely.

Center Starter Ideas (grades shown in brackets)

Time: Calendars to customize, daily and weekly schedules with dates and times, clocks and watches to play with and take apart, appointment books (K-3)

Money: Penny jar, pennies, play money, menus, catalogs, store items (K-3), , balancing a checkbook, budgeting (5 and up)

Measuring: Measuring cups, measuring spoons, containers of different sizes, scale, sand, pebbles, liquids to measure (K-3), designing a garden or room (4 and up)

Sorting: Mixed bead, button, or bead collections for sorting, estimating, counting (different colors, sizes, shapes) (K-2)

Building, construction: Blocks, Legos, paper cups, cardboard, straws, twist-ties to construct twoand three-dimensional shapes (K-4); straws, tape, scissors, papers, graph paper, paint with challenges (3-6), plywood, wood scraps, tools, electronics equipment (6 and up)

Puzzles: All grades with increasing complexity

Shapes: Posters with shapes, crayons, pencils, construction paper, graph paper, different sizes of triangles, squares, rectangles, and circles, two- and three-dimensional shapes and objects to trace, draw, cut out, and play with (K-3)

Patterns and rhythms: Rhythm instruments to beat out patterns, paper for students to write beat patterns in symbols for others to follow (e.g., a =short tap, b =long tap). (2-4)

STEM Experiments and building kits: Use downloaded instructions and gather materials for experiments and make them available regularly. Also include building kits such as model airplanes and boats, paper airplanes, etc. (2-6)









STEM CENTER PLANNER

Description/the	eme of center							
Life sciences Math Other	s (check all that apply) , biology Physical Enginee	ring						
Learning object	tives/purpose							
	rs at one time Individual work	Pairs	Small groups	Any				
Instructions	Clearly written for users to understand Needs to be explained or demonstrated Users can explain to each other							
Availability	Always Days/times Homework By request							
Supervision	 None, general only Periodic check Demonstrations and explanations needed Active supervision							
Extensions and	support Additional resource Expert contacts Additional material							
Supplies neede Instructio	d ons (instruction card or p	paper to includ	le)					
Materials	, tools, equipment							









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Actively used	
Instructions clear, little supervision needed _	
Used by all participants	
Positive outcomes	
Meeting objectives	

Comments, changes, extensions:





